



# CHARLOTTE FIRE DEPARTMENT

Fire Marshal's Office  
CFD Headquarters  
500 Dalton Ave  
Charlotte, NC 28206

## Requirements for Access and Fire Protection at Construction Sites

The effectiveness of the Charlotte Fire Department is largely dependent on response time, so an unobstructed driving surface, as well as access to fire protection appliances, is critical when response time can impact the outcome of a fire or medical emergency. The purpose of these guidelines are to establish some minimum requirements, most of which are outlined in Chapter 14 of the North Carolina Fire Code, for fire access and fire protection at new construction sites, particularly those that involve new “shell building” projects that incorporate standpipe systems and/or private fire hydrants.

### Fire Department Access Roads:

Once vertical construction begins, there shall be a fire access road that enables the fire department to access the site, and this road shall be capable of reaching with-in 100 feet of temporary or permanent sprinkler or standpipe connections. In addition, this road shall:

- Be of an all-weather driving surface capable of handling the imposed load of fire apparatus (up to 80,000 pounds).
- Be no less than 20-feet wide and have a vertical clearance of no less than 14 feet.
- Have a minimum turning radius of 42 feet outside and 30 feet inside.
- Have a slope no greater than 10%.
- Roads with a dead-end that exceeds 150 feet shall be provided with an approved turn-around such as a hammerhead or other approved method.
- Any gate or other security device shall either have a Knox padlock, or be arranged such that we can gain entry quickly with forcible entry tools (i.e. bolt cutters, etc.).
- Be maintained throughout the project until permanent fire access roads are available.

### Signage:

The access road point of entry shall be posted with a sign that meets the following criteria:

- The sign shall be of a durable material that can withstand inclement weather conditions.
- This sign shall read “Fire Department Access” and shall also include the address of the project.
- Sign shall have a minimum dimension of 3' x 3' and shall have a red background with white lettering. Lettering and numbering shall be of a reflective material.
- Lettering and numbering for sign shall be a minimum of 6 inches in height, except in cases where space is an issue, the address numbers and lettering may be reduced to 4 inches in height.
- Sign shall be posted so that bottom of sign is no less than 6 feet above grade.

## **Fire Protection:**

Once vertical construction begins or once combustible materials are brought onto the site, per the North Carolina Fire Code - Chapter 14, an approved water supply for fire protection shall:

- Be installed and approved by CFD, and maintained operable throughout the construction process. If this water supply is a temporary water tank or other cistern instead of required hydrants, ***this arrangement MUST receive prior approval of the Fire Marshal.*** If approved, it shall be located at the construction site main entrance and be of a quantity sufficient to meet the needed fire flow for a 30-minute period shall be provided.
- If the water supply is the required private or public hydrant(s), they shall remain fully accessible at all times and shall never be blocked by construction vehicles or debris.
- Any ***temporary*** access road shall be such that no hydrant or temporary water supply is more than 100 feet from the access road.

For buildings that incorporate a fire standpipe system:

- There shall be at least one standpipe provided for use during construction.
- Such standpipe shall be installed once construction progresses more than 40 feet above the lowest level of fire department access.
- Standpipes shall be provided with fire hose connections at accessible locations either adjacent to usable stairs, or in their permanent locations in stairways if provided.
- As construction continues, standpipes shall progress to within one floor of the highest floor of construction having secured decking or flooring.

Fire extinguishers shall be:

- Installed and maintained on all floor levels at each stairway.
- Shall be checked daily by the superintendent or their designee.
- Additional extinguishers shall be required and located nearby those areas during special operations such as welding and cutting, handling of flammable liquids, etc.

## **General:**

- Combustible waste and construction debris shall be kept to a minimum and shall not be located as to obstruct any access road or fire appliance.
- Any parking deck may NOT be used unless all guidelines established here-in are followed, AND the required fire separation between the deck and attached structure is in place with all openings protected with fire doors or other opening protectives.